

REMARKS

Claims 12-15 are pending. Claims 12-14 have been amended. No new matter has been added. Claim 15 has been canceled and its subject matter has been incorporated in claims 12-14. Upon entry of this amendment, claims 12-14 will be pending.

Claims 12-15 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Claims 12-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lai *et al.* (Biochimica et Biophysica Acta, Vol. 1517, Pages 449-454, 2001) (hereinafter “Lai”) in view of Benson *et al.* (Nucleic Acids Research, Vol. 21, Pages 2963-2965, 1993) (hereinafter “Benson”). Because claim 15 has been canceled, the rejections of claim 15 have been considered moot.

Rejection of Claims 12-14 under 35 U.S.C. § 101

Claims 12-14 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. This rejection is respectfully traversed. Accordingly, claims 12-14 have been amended to recite how the claims are tied to a particular machine or apparatus. Exemplary support can be found in the specification and the originally-filed claims, which recite a “computer program,” “computer program product,” “computer readable medium,” “module,” “database,” “graphical user interface,” “Internet,” “browser,” “application service provider,” and “network devices.” Therefore, it is respectfully requested that the rejection of claims 12-14 under 35 U.S.C. § 101 be withdrawn.

Rejection of Claims 12-14 under 35 U.S.C. § 103(a)

Claims 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lai in view of Benson. This rejection is respectfully traversed.

Lai and Benson, alone or in combination, fail to teach “identifying from the selected genomic database the results of the search that are not a unique sequence and re-evaluating a subset of those results for unique sequences,” as recited in claims 12 and 14, and “wherein a subset of the results of the search that are not a unique sequence are re-evaluated by the search interface module,” as recited in claim 13. Accordingly, the pending claims are directed to a

system or a method for inferring genomic sequences unique to a at least one set of organisms by identifying unique sequences and then analyzing the similar sequences for other unique sequences. This process allows for the identification of informative biomarkers. BLAST can be used to identify similarities of sequences and rank the sequences based on the percentage of similarities. In contrast, claims 12-14 recite how non-unique sequences can be re-evaluated and, if no unique sequences are found, then the non-unique sequences are removed from the database. Lai and Benson fail to teach this feature.

With regard to the “removal” element previously recited in claim 15, on page 7 of the Office Action, the Examiner asserts, “By providing user controlled parameters, Lai et al. identifies sequences unique to the user’s specification, thus by selecting, identifying or distinguishing unique sequences one skilled in the art would be effectively removing said sequences from consideration with other non-unique sequences in a database.” However, the identification of a similar sequence is not equivalent to removing a non-unique sequence from a database. The Examiner makes a great leap here that is not supported by the teachings of the cited references. While Lai may recite the use of BLAST to identify similar sequences, removing sequences from a database is patentably distinct.

Thus, Lai and Benson do not teach or suggest each and every element of claims 12-14. Accordingly, it is respectfully requested that the rejection of claims 12-14 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

The undersigned representative respectfully submits that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution might be advanced by discussing the application with the undersigned representative, in person or over the telephone, we welcome the opportunity to do so. In addition, if any additional fees are required in connection with the filing of this response, the Commissioner is hereby authorized to charge the same to Deposit Account No. 50-4402.

Respectfully submitted,

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